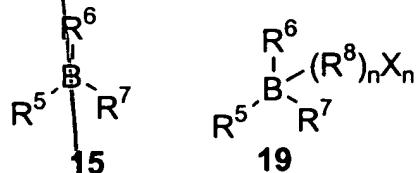


where R<sup>1</sup> and R<sup>2</sup> are each independently selected from the group consisting of hydrogen, alkyl, cycloalkyl, aryl, heteroaryl, acyl, acylalkyl, carboxy, carboxamido, trialkylsilyl, aryldialkylsilyl, diarylalkylsilyl, triarylsilyl, phosphinyl, and -YR, where Y is selected from the group consisting of -O-, -NR<sub>a</sub>-, -S-, -SO-, and -SO<sub>2</sub>-, and R and R<sub>a</sub> are each independently selected from the group consisting of hydrogen, alkyl, aryl, heteroaryl, and acyl, or R<sup>1</sup> and R<sup>2</sup> together form a methylene bridge of 2 to 20 carbon atoms; and where R<sup>3</sup> and R<sup>4</sup> are each independently selected from the group consisting of hydrogen, carboxy, carboxamido, alkyl, cycloalkyl, aryl and heteroaryl provided that the compound of formula 14 is not paraformaldehyde;

providing compounds of formula 15 or formula 19



where R<sup>5</sup> is selected from the group consisting of alkyl, cycloalkyl, aryl, heteroaryl, alkenyl, alkynyl and allenyl; R<sup>6</sup>, R<sup>7</sup> and R<sup>8</sup> are selected from the group consisting of hydroxy, alkoxy, aryloxy, heteroaryloxy, chloro, bromo, fluoro, iodo, carboxy, amino, alkylamino, dialkylamino, acylamino, carboxamido, thio, alkylthio, arylthio, acylthio, alkyl, cycloalkyl, aryl, and heteroaryl, or together form a methylene bridge of 3 to 7 atoms; X is a positive counter ion, and n is 0 or 1;

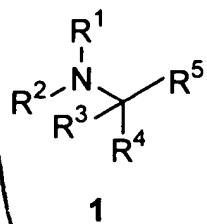
mixing said compounds of formula 13, formula 14, and formula 15 or 19 to form a reaction mixture; and

C  
CONT.

C  
CONT. allowing the reaction mixture to react to form the compound in the combinatorial library.

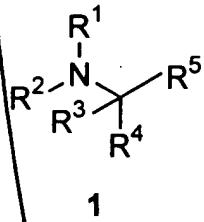
19. (Amended) The combinatorial library of claim 12, wherein:

    said combinatorial library is prepared by reacting a plurality of different compounds of one or more of formula 13, formula 14, formula 15 and/or formula 19 to generate a plurality of compounds of formula 1:



20. (Amended) The combinatorial library of claim 12, wherein:

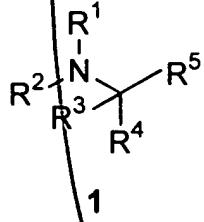
    said combinatorial library includes a mixture of different compounds of formula 1:



    said mixture being prepared from a reaction mixture including a plurality of different compounds of one or more of formula 13, formula 14, formula 15, and/or formula 19.

21. (Amended) The combinatorial library of claim 18, wherein:

    said combinatorial library includes a plurality of different compounds of formula 1:



    each of the plurality of different compounds of formula 1 being located at a different position in an array.

29. (Amended) The combinatorial library of claim 12, wherein:

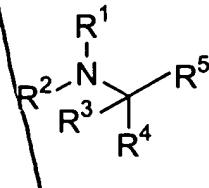
*C3*  
mixing the compounds of formula 13, formula 14 and formula 15 or 19 to form a reaction mixture includes mixing the compounds of formula 13, formula 14 and formula 15 or 19 in the presence of air.

34. (Amended) The combinatorial library of claim 12, wherein:

*CA*  
said reaction mixture includes at least one compound of formula 14 for which R<sup>3</sup> is hydroxyaryl and at least one of the compounds of formula 1 is an amino phenol.

35. (Amended) The combinatorial library of claim 12, wherein:

at least one of the compounds of formula 13, 14, 15 or 19 is chiral and the combinatorial library includes at least one of the compounds of formula 1 that is produced stereoselectively:



Please add new claims 36-43 as follows:

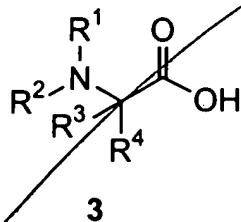
*Sub*  
--36. (New) The combinatorial library of claim 19, further comprising:

transforming one or more of the plurality of compounds of formula 1 to generate the combinatorial library.

*US*  
37. (New) The combinatorial library of claim 12, wherein:

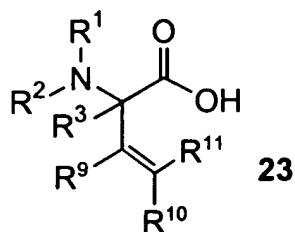
the combinatorial library includes a plurality of  $\alpha$ -amino acid derivatives of formula 3:

D/Chart



38. (New) The combinatorial library of claim 37, wherein:

the combinatorial library includes a plurality of  $\beta,\gamma$ -unsaturated- $\alpha$ -amino acid derivatives of formula 23:

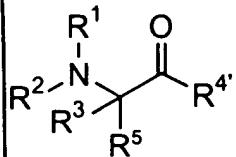


where R<sup>9</sup>, R<sup>10</sup> and R<sup>11</sup> are selected from the group consisting of alkyl, cycloalkyl, aryl, heteroaryl, alkenyl, alkynyl, allenyl, alkoxy, aryloxy, heteroaryloxy, chloro, bromo, fluoro, iodo, carboxy, amino, alkylamino, dialkylamino, acylamino, carboxamido, thio, alkylthio, arylthio, and acylthio.

39. (New) The combinatorial library of claim 12, wherein:

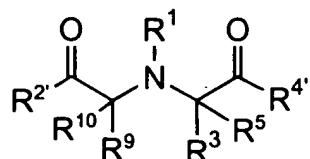
the combinatorial library includes a plurality of  $\alpha$ -amino carbonyl derivatives of formula

4:



where R<sup>4</sup> is selected from the group consisting of hydrogen, hydroxy, alkoxy, aryloxy, heteroaryloxy, carboxy, amino, alkylamino, dialkylamino, acylamino, carboxamido, thio, alkylthio, arylthio, acylthio, alkyl, cycloalkyl, aryl, and heteroaryl.

40. (New) The combinatorial library of claim 12, wherein:  
the combinatorial library includes a plurality of N-carboxymethyl amino acid derivatives  
of formula 5:



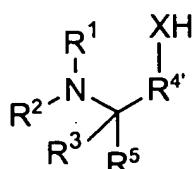
5

where  $R^{2'}$  is selected from the group consisting of alkyl, cycloalkyl, aryl, heteroaryl, hydroxy, alkoxy, aryloxy, heteroaryloxy, acyl, carboxy, amino, alkylamino, dialkylamino, acylamino, carboxamido, alkylthio, arylthio, acylthio, trialkylsilyl, aryldialkylsilyl, diarylalkylsilyl, triarylsilyl, phosphinyl, alkylsulfonyl and arylsulfonyl, and  $R^1$  and  $R^{2'}$  can be connected together to form a bridge of 2 to 20 atoms;

*CS*  
 $R^{4'}$  is selected from the group consisting of hydrogen, hydroxy, alkoxy, aryloxy, heteroaryloxy, carboxy, amino, alkylamino, dialkylamino, acylamino, carboxamido, thio, alkylthio, arylthio, acylthio, alkyl, cycloalkyl, aryl, and heteroaryl; and

$R^9$  and  $R^{10}$  are selected from the group consisting of alkyl, cycloalkyl, aryl, heteroaryl, acyl and carboxy, and  $R^9$  and  $R^{10}$  can be connected together or with other groups to form a bridge of 3 to 7 atoms.

41. The combinatorial library of claim 12, wherein:  
the combinatorial library includes a plurality of 1,2-diamines and/or 1,2-amino alcohols  
of formula 29:



29

where  $R^{4'}$  includes at least one carbon atom; and